

**Docket #:** S23-359

# **Apparatus for efficient vibrotactile and electrotactile fingertip stimulation**

The Tass Lab has invented non-invasive, Vibrotactile Coordinated Reset (vCR) stimulation devices and methods to safely and efficiently treat brain disorders characterized by abnormal neuronal synchrony such as Parkinson's disease.

This invention allows for vibrotactile and/or electrotactile and/or electrical and/or infrared fingertip stimulation with minimal amount of artificial hand stimulation. Additionally, it mitigates issues such as moisture buildup and discomfort resulting from friction. Moreover, this device establishes a secure link between lightweight controllers and fingertip stimulators. The consistent physiological input to uncovered hand skin promotes sensory enhancement, fostering beneficial plasticity mechanisms and therapeutic effects.

## **Stage of Development**

- Prototype
- Ready for clinical studies

## **Related Technologies:**

17-270: [Safe and efficient vibrotactile multi-channel stimulation for the treatment of brain disorders](#)

23-357: [Apparatus for efficient vibrotactile stimulation, especially vibrotactile fingertip stimulation](#)

23-360: [Apparatus and method for efficient long-term multi-channel non-invasive stimulation for the treatment of disorders of the nervous system](#)

23-373: [Apparatus and method for efficient multichannel vibrotactile stimulation with compound pulses](#)

23-406: [Apparatus and method for efficient combined vibrotactile and electrotactile stimulation for the therapy of disorders of the nervous system](#)

23-407: [Apparatus for efficient electrotactile fingertip stimulation for the treatment of disorders of the nervous system](#)

23-408: [Apparatus and method for efficient wireless synchronization of multi-site non-invasive stimulation for the treatment of disorders of the nervous system](#)

23-409: [Method and apparatus for autonomous parameter adaptation of non-invasive multichannel stimulation](#)

## **Applications**

- Glove (fingertip stimulation) for the therapy of Parkinson's Disease and other movement related disorders

## **Advantages**

- Non-invasive
- Effective treatment with minimal amount of artificial hand stimulation
- Reduces moisture buildup and discomfort resulting from friction
- Direct skin contact promotes sensory enhancement, fostering beneficial plasticity mechanisms and therapeutic effects

## **Innovators**

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## **Licensing Contact**

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